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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,298	02/02/2001	Ira D. Sasowsky	UA372	9202

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EXAMINER
BARRY, CHESTER T

ART UNIT	PAPER NUMBER
1724	13

DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/776,298	Applicant(s) SASOWSKY ET AL.	
	Examiner Chester T. Barry	Art Unit 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

All rejections from the Office action mailed 10/8/02 are incorporated herein by reference, repeated, and maintained except as noted below:

The §112(2nd) rejection of claim 6 is withdrawn.

All references to claim 6 in any other rejections ~~all~~ is omitted from those rejections.

Applicants argue Behrends is unclear with respect to whether the substrate described there is or can be a mixture two different materials. The examiner disagrees. Behrends discloses: "[B]iofilms residing on backfill substrate, [that is,

biofilms residing on river gravel,

biofilms residing on limestone,

biofilms residing on river gravel and limestone,

biofilms residing on river gravel and any other appropriate substrate,

biofilms residing on limestone and any other appropriate substrate,

biofilms residing on river gravel, limestone and any other appropriate substrate, and

biofilms residing on any appropriate substrate other than river gravel or limestone] for that is what the passage at col 8 lines 4 – 11 ~~says~~ means. If it doesn't mean that, then applicants are invited to file a 132 declaration from a university or college English professor explaining what it does mean. The declaration would be considered very

carefully,[1] but also in light of claim 7 of USP 5945035 to Vogt. Vogt is substantial evidence that in English, a substrate can be mixture of heterogeneous materials.

Applicants argue that in the Behrends passage above, "and/or" means that a single substrate ~~be~~ is present for his process. Applicants' argument is premised on the point that a substrate may not be a mixture of different materials. The examiner finds this argument unpersuasive. Applicants' very own specification describes flowing a solution "through a gravel form of at least one neutralizing agent and at least one precipitating agent." If the examiner were to adopt applicants' argument with regard to Behrends use of "substrate" in the narrow sense of relating to only a homogeneous material, then how could it be that "a" gravel form could be comprised of two different agents?

Applicants argue that it is "incontrovertible" (i.e., not open to question), that Behrends does not teach that using two specific materials together can result in improved precipitation of metals from solution. Applicants' argument is inapposite of novelty. Hence, even if Behrends fails to appreciate a synergistic or other unexpected benefit of using a mixture of different materials as his "substrate" associated with precipitation of metals from solution, it would not be relevant on the question of novelty. Further, with respect to the use of Behrends in the §103 rejection, applicants have not shown or demonstrated any unexpected results, i.e., better results using a mixture of neutralizing

[1] It would be helpful for such a credentialed expert to comment on whether it is reasonable to question what "and/or" means. In the expression "A and/or B," does it not unquestionably mean, "A without B, B without A, or both A and B together"? The examiner finds applicants' "questionable interpretation" argument (at page 4) related to the meaning of "and/or" unquestionably unpersuasive.

cl. 7

agent and precipitating agent vs. sequential treatment of the solution first through a bed of either only neutralizing agent (or only precipitating agent) followed by passage through a bed of only precipitating agent (or neutralizing agent), respectively. If those test results are available, I'd like to see them.

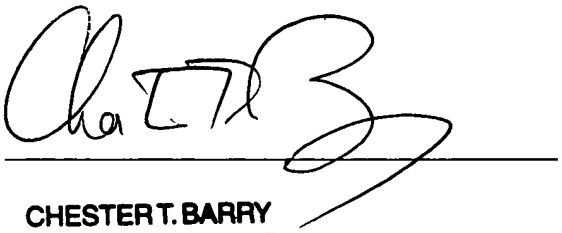
Applicants' reference to "unexpected results" at page 3 line 22 is unsupported by probative evidence. See the suggested test results discussed above. It is not clear from Table 4 how much sandstone was used in the "sandstone [only]" test (first table entry) and how much limestone was used in the "limestone [only]" test (second table entry). The amounts of each were reported only for the mixed test (5 g each of sandstone and limestone).

Applicants' remaining arguments were also carefully considered, but they were not persuasive. Applicants did not respond to the §112, rejection of claim 10.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



CHESTER T. BARRY
PRIMARY EXAMINER

703-306-5921